

**REMARKS**

Claims 1-16 are pending and under consideration in the above-identified application.

In the Office Action, Claims 1-16 were rejected.

With this Amendment, Claims 1, 2, 6, and 11 are amended, and Claim 10 is cancelled.

Accordingly, Claims 1 – 9 and 11 – 16 are at issue.

**I.     Double Patenting Rejection of Claims**

Claim 10 was rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 5.

In response to this objection, Claim 10 has been cancelled.

Accordingly, Applicants respectfully request withdrawal of this rejection.

**II.    35 U.S.C. § 102 Anticipation Rejection of Claim 1**

Claim 1 was rejected under 35 U.S.C. § 102(e) as being anticipated by Yasukawa et al. (“Yasukawa”) (U.S. Publication No. 2006/0172201).

The instant application claims priority to the Japanese Patent Application No. 2002-335055, which was filed on November 19, 2002. The cited reference, U.S. Publication No. 2006/0172201, to Yasukawa was filed in the United States on June 25, 2003.

In order to overcome the date of the Yasukawa reference relied upon by the Examiner for this 102(c) rejection and in accordance with 37 CFR 1.55, Applicant is obtaining a certified English translation of the certified copy of the corresponding Japanese Application No. 2002-335055. This certified translation will be submitted in a supplemental amendment.

Accordingly, Applicants respectfully request that these rejections of Claim 1 under 35 U.S.C. § 102(c) be withdrawn.

**III.   35 U.S.C. § 102 Anticipation Rejection of Claim 1**

Claim 1 was rejected under 35 U.S.C. § 102(e) as being anticipated by Mic et al. (“Mic”) (U.S. Publication No. 2004/0106047).

The instant application claims priority to the Japanese Patent Application No. 2002-335055, which was filed on November 19, 2002. The cited reference, U.S. Publication No. 2004/0106047, to Mie was filed in the United States on October 22, 2003.

In order to overcome the date of the Mie et al. reference relied upon by the Examiner for this 102(e) rejection and in accordance with 37 CFR 1.55, Applicant is obtaining a certified English translation of the certified copy of the corresponding Japanese Application No. 2002-335055. This certified translation will be submitted in a supplemental amendment.

Accordingly, Applicants respectfully request that these rejections of Claim 1 under 35 U.S.C. § 102(e) be withdrawn.

**IV. 35 U.S.C. § 103 Obviousness Rejection of Claims 2-10, 11-16**

Claims 2-10, 11-16 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Yasukawa.

Based on the above discussion related to the 35 U.S.C. § 102(e) anticipation rejection, Claims 2-10, 11-16 are patentable over Yasukawa, because Yasukawa is not prior art.

Accordingly, Applicants respectfully request withdrawal of this rejection.

**V. 35 U.S.C. § 103 Obviousness Rejection of Claims 2-10, 11-16**

Claims 2-4, 7-9 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Mie et al. ("Mie").

Based on the above discussion related to the 35 U.S.C. § 102(e) anticipation rejection, Claims 2-10, 11-16 are patentable over Mie, because Mie is not prior art.

Accordingly, Applicants respectfully request withdrawal of this rejection.

**VI. 35 U.S.C. § 103 Obviousness Rejection of Claims 11-16**

Claims 11-16 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Ohshita et al. (“Ohshita”) (U.S. Patent No. 6,511,776).

Claim 11 is directed to a battery, which comprises a cathode, an anode, and an electrolyte. The anode has an anode collector *made of an electrolytic copper foil* and an anode active material layer *including at least one from the group consisting of silicon and compounds of silicon* which is provided on the anode collector by vapor-phase method, and the electrolyte contains an electrolyte solution containing vinylene carbonate and an electrolyte salt. A content of the vinylene carbonate in the electrolyte solution is from 0.1 wt % to 30 wt %.

In contrast, Ohshita discloses that (emphasis added)

“<Fabrication of Negative Electrode>

In fabricating a negative electrode, a natural graphite powder having an average particle size of 10  $\mu\text{m}$  and  $d_{002}$  of 3.35 $\text{\AA}$  was used as a negative electrode material. The natural graphite powder and polyvinylidene fluoride as a binding agent were mixed in the weight ratio of 95:5.

The above-mentioned each polymer for use in the polymer electrolyte, i.e., *a polystyrene-polyethylene oxide copolymer in Example A1; polyethylene oxide in Example A2; polyvinylidene fluoride in Example A3; and polyacrylonitrile in Example A4 was added to a mixture obtained at a ratio of 3% by weight. Then, N-methyl-2-pyrrolidone was further added to the mixture, and the mixture was brought into a slurry.* Next, the slurry was applied to a copper foil as a negative-electrode current collector by means of the doctor blade coating method. The slurry on the positive-electrode current collector was compressed, and then subjected to vacuum heat-treatment at 130 °C., to obtain a disk-like negative electrode 2 having a diameter of 10 mm and a thickness of approximately 70  $\mu\text{m}$ .<sup>”</sup>

Therefore, Ohshita fails to teach or suggest that the anode active material layer consists of silicon and/or compounds of silicon which is provided on the anode collector by vapor-phase method.

Thus, Claim 11 is patentable over Ohshita, as are dependent Claims 12 – 16, for at least the same reasons.

Accordingly, Applicants respectfully request withdrawal of this rejection.

**VII. Discussion of new Claims 17 – 21**

New Claim 17 is directed to a battery. The battery comprises a cathode, an anode, and an electrolyte. The anode has an anode collector and an anode active material layer including silicon which is provided on the anode collector by a sintering method.

Applicants submit that none of the cited references teach or suggest an anode active material layer that includes silicon which is provided on the anode collector by a sintering method.

Thus, Claim 17 is patentable over the cited references, as is dependent Claim 18, for at least the same reasons.

New Claim 19 is directed to a battery. The battery comprises a cathode, an anode, and an electrolyte. The anode has an anode collector and an anode active material layer including tin which is formed on the anode collector by a plating method.

Applicants submit that none of the cited references teach or suggest an anode active material layer that includes silicon which is provided on the anode collector by a sintering method.

Thus, Claim 19 is patentable over the cited references, as is dependent Claims 20 and 21, for at least the same reasons.

**VIII. Conclusion**

In view of the above amendments and remarks, Applicant submits that Claims 1 – 9 and 11 – 16 are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

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By: /David R. Metzger/  
David R. Metzger  
Registration No. 32,919  
SONNENSCHEIN NATH & ROSENTHAL LLP  
P.O. Box 061080  
Wacker Drive Station, Sears Tower  
Chicago, Illinois 60606-1080  
(312) 876-8000